

CLAIMS

1. A method to increase the flavor metabolism of yeast and/or bacteria in long fermentation systems, which comprises the steps of adding a sufficiently effective amount of a an ingredient formulation comprising a free amino acid blend to a fermentation system, said amino acid blend comprising at least one amino acid selected from the group consisting of Leucine, Valine, Iso-Leucine and Phenylalanine.
- 10 2. The method of claim 1, wherein the amino acid blend comprises at least Phenylalanine.
3. The method of claim 1, wherein the amino acid blend comprises at least Leucine, Valine, Iso-Leucine and Phenylalanine.
- 15 4. The method according to any of the preceding claims, wherein the amino acid ratio of said blend is: Leucine: 0 to 4; Valine: 0 to 3; Iso-Leucine: 0 to 3; and Phenylalanine 0 to 3.
- 20 5. The method according to claim 4, wherein the amino acid ratio of said blend is: Leucine: 2; Valine: 0.6; Iso-Leucine: 0.5; and Phenylalanine 0.5.
- 25 6. The method according to any of the preceding claims, wherein the dosage of the blend of amino acids is at least 0.001 %, preferably at least 0.05 % (on total flour) in the final product.
7. The method according to any of the preceding claims, wherein the dosage of the blend of amino acids is about 0.0375% on total flour of a bakery product.
- 30 8. The method according to claim 1, wherein the amino acid blend is added to a pre-dough system or a sourdough system.

9. The method according to claim 3, wherein the sourdough is a fresh or a dried sourdough.

10. The method according to any of the preceding claims, wherein the amino acid blend is obtained
5 from a protein hydrolysate.

11. The method according to any of the preceding claims, wherein the amino acid blend is added to raw materials used in fermentation systems such as flour, malt extract, wheat or other germs, a fermentable carbon
10 source, bran or malt.

12. The method according to any of the preceding claims, which further comprises the step of adding other enhancers of the flavor metabolism, other flavor enhancers and/or yeast.

15 13. The method according to any of the preceding claims, which further comprises the step of adding a carbon source.

14. The method according to any of the preceding claims, which further comprises the step of adding
20 specific enzymes such as protease, transaminase, carboxylase, dehydrogenase, esterase.

15. The method according to any of the preceding claims, which further comprises the step of adding a protein hydrolysate.

25 16. A fermentation product obtainable via any of the preceding methods.

17. An ingredient formulation comprising a free amino acid blend to a fermentation system, said amino acid blend comprising at least one amino acid selected from
30 the group consisting of Leucine, Valine, Iso-Leucine and Phenylalanine.

18. The ingredient formulation according to claim 17, wherein the amino acid blend comprises at least Phenylalanine.

19. The ingredient formulation according to 5 claim 17, wherein the amino acid blend comprises at least Leucine, Valine, Iso-Leucine and Phenylalanine.

20. The ingredient formulation according to any of claims 17 to 19, wherein the amino acid ratio of said blend is: Leucine: 0 to 4; Valine: 0 to 3; Iso-Leucine: 0 to 10 3; and Phenylalanine 0 to 3.

21. The ingredient formulation according to claim 20, wherein the amino acid ratio of said blend is: Leucine: 2; Valine: 0.6; Iso-Leucine: 0.5; and Phenylalanine 0.5.

15 22. A dry ingredient formulation according to any of claims 17 to 21, with a dry matter content of at least 90%.

23. A combination of the ingredient formulation according to any of claims 17 to 21 with yeast 20 and possibly a sourdough.

24. The combination according to claim 23, wherein the combination has a dry matter content of at least 90%.

25. The combination according to claim 23 or 24, produced by co-extrusion or dry blending.

26. The ingredient formulation according to claim 22 or the combination according to any of claims 23 to 25 which is vacuum packed.